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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :

Rueben Matalon et al. Group Art Unit: 1814

Serial No.: 09/965,807 Examiner: G. Bugaisky

Filed: October 1, 2001

For: APARTOACYLASE GENE, PROTEIN, AND METHODS OF SCREENING FOR MUTATIONS ASSOCIATED WITH CANAVAN DISEASE

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to initial examination, please amend the above-identified application as follows:

IN THE SPECIFICATION:

After the Title, please insert:

-- This application is a continuation of U.S. Ser. No. 08/128,020, filed Sept. 29, 1993, which is incorporated by reference herein in its entirety.--

IN THE CLAIMS:

Please cancel claims 21 and 23 without prejudice or disclaimer.

Please amend the claims as follows:

20. (Amended) A recombinant [An isolated] normal human aspartoacylase [polypeptide] capable of hydrolyzing N-acetyl aspartic acid to aspartate and acetate, having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof.

22. (Amended) [A] An isolated mutant human aspartoacylase yhaign either an altered ability to hydrolyze N-acetyl-aspartic acid to aspartate and acetate, as compared with a normal human aspartoacylase, or incapable of hydrolyzing N-acetyl-aspartic acid to aspartate and acetate, and having the amino acid sequence SEQ ID NO: 2, except for said mutation, which is

E285 > A,

Y231 > X, and/or

A305 > E,

or an allelic variant of said mutant aspartoacylase.

24. (Amended) A mutant aspartoacylase of claim [23] 22, wherein the glutamic acid at amino acid position 285 is substituted by alanine.

Please add the following new claims:

66. (New) A fragment of a mutant human aspartoacylase of claim 22, comprising an aspartoacylase epitope.

67. (New) A recombinant normal human aspartoacylase capable of hydrolyzing N-acetyl aspartic acid to aspartate and acetate, having an amino acid sequence which has a sequence identity of at least 95% to the sequence of SEQ ID NO: 2.

68. (New) A fragment of a recombinant normal human aspartoacylase of claim 20, comprising an aspartoacylase epitope.

69. (New) A pharmaceutical composition, comprising an isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, and a pharmaceutically acceptable carrier.

70. (New) An isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, which is free of other cellular components.

71. (New) An isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, which is free of other human proteins.

72. (New) A preparation which consists essentially of a normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof.

73. (New) An isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, in a concentration which can be administered to a patient at a dosage of 0.1 to 100 U/kg.

74. (New) A normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, produced by

(a) culturing a host cell transformed with a vector comprising a DNA which encodes for a normal human aspartoacylase of claim 20 in a cell culture medium under conditions whereby the aspartoacylase is expressed, and

(b) isolating the thus-produced normal aspartoacylase.

75. (New) A normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, produced in a bacterium, a fungus, or a non-human mammalian cell.

76. (New) An immunologically active anti-aspartoacylase polycolonal or monoclonal antibody specific for an aspartoacylase polypeptide of claim 20.

77. (New) An immunologically active anti-aspartoacylase polyclonal or monoclonal antibody specific for an aspartoacylase polypeptide of claim 22.

78. (New) A hybridoma producing a moloclonal antibody specific for an aspartoacylase polypeptide of claim 20.

79. (New) A hybridoma producing a moloclonal antibody specific for an aspartoacylase polypeptide of claim 22.

80. (New) A recombinant normal human aspartoacylase capable of hydrolyzing N-acetyl aspartic acid to aspartate and acetate, having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof.

81. (New) A normal human aspartoacylase polypeptide purified to homogeneity and capable of hydrolyzing N-acetyl-aspartic acid to aspartate and acetate.

82. (New) The aspartoacylase of claim 81 having SEQ ID NO: 2.

REMARKS

Claims 22 and 24, in the amended form presented herein, were allowed in the parent application, U.S. Ser. No. 08/128,020. Support for new claim 66, which depends from claim 22, is found in the specification, *e.g.*, at page 5, line 12.

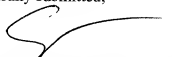
Claims 21 and 23 are canceled as being redundant over pending claims.

Support for new claims which recite fragments comprising aspartoacylase epitopes (*e.g.*, claims 66 and 68) is found in the specification, *e.g.*, at page 5, line 12; and support for claims which recite a sequence identity of greater than 95% (*e.g.*, claim 67) is found, *e.g.*, at page 13, last four lines.

New claims 76-79 correspond to original claims 51-54, respectively. Claim 80 is an amended version of claim 20, the subject of the appeal in the parent, a copy of which is not being filed since the examiner has access to it in the parent. Claims 81-82 are supported, e.g., at page 16, lines 29-31.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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Date: February 4, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

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